City of Nashua
Planning Department
229 Main Street
Nashua, New Hampshire 03061-2019

Planning & Zoning 589-3090
WEB www.nashuanh.gov

SPECIAL EXCEPTION APPLICATION (ZBA)

PLEASE NOTE: INCOMPLETE OR ILLEGIBLE APPLICATIONS WILL NOT BE ACCEPTED

I. SPECIAL EXCEPTION INFORMATION

1. ADDRESS OF REQUEST: 65 Spit Brook Road

   Zoning District: Park Industrial (PI) Sheet: N/A Lot: A-12

2. SPECIAL EXCEPTION(S) REQUESTED:

   A special exception is being requested to impact approximately 311 square feet of wetland buffer to convert an existing paved parking lot into an electrical equipment building.

II. GENERAL INFORMATION

1. **APPLICANT / OPTIONEE** (List both individual name and corporate name if applicable)

   (Print Name): BAE Systems Information & Electronic Systems Integration Inc. - Norman Coutu

   Applicant's signature Norman D. Coutu Date 12/21/2021

   Applicant's address: 65 Spit Brook Road, Nashua, NH 03061-0868 P.O. Box 868 NHQ 01-193

   Telephone number H: Work 603-885-0469 C: E-mail: norman.d.coutu@baesystems.com

2. **PROPERTY OWNER (Print Name):** BAE Systems Information & Electronic Systems Integration Inc. - Norman Coutu

   ***Owner's signature** Norman D. Coutu Date 12/21/2021

   Owner's address: 65 Spit Brook Road, Nashua, NH 03061-0868 P.O. Box 868 NHQ 01-193

   Telephone number H: Work 603-885-0469 C: E-mail: norman.d.coutu@baesystems.com

***Agents and/or option holders must supply written authorization to submit on behalf of owner(s).**

OFFICE USE ONLY *Date Received* 12/21/21 *Date of hearing* 1/25/22 **Application checked for completeness:** CF

A# 21-0298 *Board Action* _____

$_____ *application fee* ☐ *Date Paid* _____ *Receipt #* _____

$_____ *signage fee* ☐ *Date Paid* _____ *Receipt #* _____

$_____ *certified mailing fee* ☐ *Date Paid* _____ *Receipt #* _____

Land Use Code Section(s) Requesting Special Exception From: _____

III. PURPOSE OF REQUEST

Answer all questions below. Provide as much information as available to give the ZBA the necessary facts to review your case. Attach additional sheets if necessary. Please see "Procedures for Filing a Special Exception" for further information.

1. Describe the nature of your proposal. Please be specific.

This project includes the construction of a generator with concrete pad and building to store electrical equipment that cannot be housed within the main building due to a lack of floor space.

2. Does your proposal involve the physical construction or expansion of a structure? Yes ☑ No ☐
If yes, describe how the size of the addition (and any existing structure) compares with the physical size of surrounding properties.

This project includes the construction of a single-story,1,350 square foot building measuring 75' x 18'. The adjacent building on the same lot measures 360' x 200' (72,000 square feet).

3. Do you anticipate the need for additional on-site parking space as a result of your proposal? Yes ☐ No ☑
If yes, approximately how many square feet of paved or designated parking space will be provide for both existing and proposed usage?

4. What effects would the requested use have upon surrounding traffic congestion and pedestrian safety?

The project is being built in an existing parking area behind main operations building and when completed is not projected to increase vehicle or pedestrian traffic to and from 65 Spit Brook Road.

5. What measures will be taken (if any) to insure that your proposal will not impair the integrity or be out of character with the zoning district or immediate neighborhood?

Due to the industrial zoning of the lot and the proposed building's location behind the main operations building, the proposed project will not impair the integrity or be out of character with the zoning district.

IV. SPECIAL EXCEPTION – ADDITIONAL QUESTIONS

Please answer all questions below that are applicable. Your answers to these questions will allow staff to better understand your request.

1. Total number of employees: 2080 Number of employees per shift: 1650 1st shift; 260 2nd shift; 20 3rd ; 150 weekend
2. Hours and days of operation: 24/7, 365 days per year
3. Number of daily and weekly visits to the premises by customers, clients, vendors, and solicitors: 10 per day
4. Number of daily and weekly commercial deliveries to the premises: 10 per day. No impact from project.
5. Number of parking spaces available: 2000. Project will remove 12 parking spaces
6. Describe your general business operations:

Development and manufacture of semi-conductor wafers, electronic systems, and associated support equipment and electronic components.

7. Describe any proposed site renovations including, but not limited to – landscaping, lighting, pavement, structural changes, signage, access, and circulation:

Renovations include the removal of existing asphalt pavement and installation of a concrete foundation for the proposed electrical equipment building. New conduit will be run from the existing main operations building to supply the proposed building with power. Disturbed grassed and paved areas will be restored in kind.

I hereby acknowledge that I have read this application and state that the above is correct and agree to comply with all the city ordinances and state laws regulating construction. I understand that only those points specifically mentioned are affected by action taken on this appeal.

Signature of Applicant — Date

Norman D. Coutu — 12/21/2021

Print Name — Date

Norman D. Coutu

3. A revised development plan shall be presented to and favorably reviewed by the Conservation Commission prior at their January 4th, 2022 meeting. The revised plan shall reflect that the following lots shall have no land within the buffer: 14, 15, 32, 39, 40, 48, 50, and 51.

4. Temporary impacts on lots 39 and 40 shall be permitted, but impact areas will be returned to a natural state following construction.

5. A note shall be added to the plan that to the maximum extent practicable, all existing stone walls shall be preserved.

SECONDED by Commissioner Cook

MOTION CARRIED 6-0

E. New Business

➢ ***BAE Systems Information & Electronic System Integration Inc. (Owner) Requesting review of permanent impacts to "Other" wetland and "Other" wetland buffer for the construction of a concrete generator pad and building for equipment storage, plus associated improvements. Property is 65 Spit Brook Rd. Sheet A, Lot 12. Zone PI and R1C. Ward 7.***

Brad Weigel, Project Manager, Hallam ICS

Mr. Weigel introduced himself as representative for the owner. He introduced members of his consulting team.

Mr. Weigel said they are trying to perform electrical upgrades, and a lot of the improvements will not fit in the current building. They are proposing a new electrical enclosure at the back of the parking lot. It does impinge on the wetland buffer.

Terry Heiss, Civil Engineer

Mr. Heiss provided an overview of the site and proposed electrical enclosure. He indicated the proposed wetland buffer impacts.

Chairman Dutzy asked if the wetland impact would be the generator installation.

Mr. Heiss said no, the generator pad is not impacting any wetlands or buffers. The only impact area is approximately 300-sqft.

Chairman Dutzy asked if that is where the parking lot is.

Mr. Heiss said correct. The existing parking lot is within the buffer area.

Chairman Dutzy asked if they will remove that and put down an enclosure area.

Mr. Heiss said that is the idea.

Chairman Dutzy asked if they are removing an impervious surface, adding a new one, and placing the generator on it.

[Unknown] said the enclosure is for the equipment.

Commissioner [Unknown] asked what is the reason for the improvements.

[Unknown] said it's specifically for that building. They are trying to keep it close to the building and minimize development impacts. All the vehicle movements at the back of the building don't give them a lot of options for where to site this. They are essentially taking away some parking spaces to the rear of the building.

Mr. Heiss said this would be a single story building.

Commissioner [Unknown] asked if there is no construction proposed outside of the existing developed footprint.

Mr. Weigel said they are limiting themselves to the already existing impervious area.

Chairman Dutzy said normally they would schedule a site walk. However, she is fairly familiar with that area and drove past it the other day to see what it looked like. She feels comfortable voting on this tonight.

Commissioner Cook asked about the difference in runoff from a parking lot and a building.

Mr. Heiss said from a stormwater analysis standpoint, the water will get to where it needs to go without a huge difference between the two. There's not really a distinction between roof runoff and water running down a paved surface.

Chairman Dutzy asked for confirmation that this is a one-story structure.

Mr. Weigel said correct.

Commissioner Cook asked if this is a flat roof.

Mr. Weigel said yes. Stormwater will leave the footprint and follow the gradient of the site.

Commissioner Sarno asked of the building would have gutters.

Mr. Weigel said they can do that. It could be designed to shed water in one direction and be gutterless, although that is unconventional in commercial buildings. Typically they would have a roof drain collection that goes to a single outlet. That could be directed onto the pavement or non-impervious area.

Chairman Dutzy asked if the results are the same because the stormwater will be collected on the roof, concentrated into a drain, and then that drain will be directed in a location that is least impactful to the wetlands.

Mr. Weigel said exactly.

Mr. Sullivan said he is aware of the existing drainage swale that discharges directly the wetlands. He asked if this would be also be directed into that drainage swale. He would be concerned about increased flow to that swale.

Mr. Weigel said in terms of where they are in the design, there is no intent to direct stormwater to that point, as they are not adjacent. It would not be part of their conventional design. If it is a concern, they wouldn't want to do that.

Mr. Sullivan recommended they look at the imagery. They can also discuss it as part of the site plan review process.

Chairman Dutzy asked the Commission if they want to perform a site walk. They are always informative.

The Commission agreed to perform a site walk on December 14th, at 8AM.

Chairman Dutzy said the wetland delineation report was very helpful. She thanked the applicants for their time.

➢ ***Canal Street Bridge Repair Informational Presentation – City of Nashua Engineering Department.***

Dan Hudson, City Engineer, City of Nashua

Mr. Hudson introduced himself and Joe Mendola, Street Construction Engineer from the Engineering Dept. With him is Jaime French from Fuss & O'Neil, the engineering company hired to design repairs for the bridge.

Mr. Hudson provided a brief introduction of the proposal. This is for the Canal Street Bridge, originally constructed in 1928. It's showing its age, and the NH Dept. of Transportation has identified that the substructure needs to be repaired. It carries over 30,000 vehicles per day, so it's very important that they keep the bridge in working status and not need to restrict it.

Jaime French, Project Manager, Fuss & O'Neil

Ms. French introduced herself as the design consultant. She presented a plan view with an aerial image, as well as photos of the bridge condition.

Ms. French said this bridge is currently on the red list, and the purpose of this is to address the condition of the concrete. She described the location and extent of deterioration on the bridge in detail. They would like to work on this bridge while dry. While most of the bridge can be accessed during low water times, they would need to use sandbags to direct the water to one side. They are not proposing any excavation, only what the contractor needs to do to access the bridge. She said they will also be doing some minor repairs on the surface as well from a vehicle impact.

Ms. French said they currently have a NH Dept. of Environmental Services Dredge and Fill permit being processed. The reason they applied for this is because this is considered a prime wetland they are working within.

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PROCESS CONTROL & PLANT AUTOMATION
COMMISSIONING & VALIDATION
TOXIC GAS MONITORING SYSTEMS
ARC FLASH & ELECTRICAL SAFETY

December 21, 2021

Kate Poirier
Zoning Coordinator – Planning Department
City Hall
229 Main Street – P.O. Box 2019
Nashua, NH, 03061

RE: Special Exception Application (ZBA) – 65 Spit Brook Road

Dear Kate Poirier,

Please find the attached Special Exception Application to the Nashua Zoning Board of Adjustment (ZBA) for our electrical upgrades design at 65 Spit Brook Road for BAE Systems. This application is initiated by the recommendation of the Nashua Conservation Commission (NCC). The NCC is currently reviewing our Wetlands Application, submitted November 22, 2021.

On behalf of BAE Systems, our consultant team requests the ZBA's review of our Special Exception Application at the January 25, 2022 meeting of the Zoning Board. We are sending a check for the application fee of $345 (basic fee plus on-site notification sign). Upon the Zoning Board's review and determination of the required abutter notifications, we will then pay the remaining fees required. Our architect and civil engineer plan to attend the January 25, 2022 meeting of the Zoning Board to answer questions from the Zoning Board.

We look forward to discussing our application with you.

Sincerely,

Brent Weigel, PhD, PE
Senior Project Manager
bweigel@hallam-ics.com

Attachments:
[Special Exception Application - BAE Systems.pdf]
[C-1 Plot Plan.pdf]

CC:
Carter Falk, Deputy Planning Manager/Zoning [carterf@nashuanh.gov]
Scott McPhie, NCC [McPhieS@nashuanh.gov]
Matthew Sullivan, Planning Department Manager [sullivanm@nashuanh.gov]
Terry Heise – Engineer, McFarland Johnson [theise@mjinc.com]

65 Spit Brook Rd

N
W E
S

Feet
0 600 1,200 2,400

NASHUA GIS

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November 22, 2021

Matthew Sullivan
Chair – Nashua Conservation Commission
City Hall
229 Main Street – PO Box 2109
Nashua, NH, 03061-2019

RE: Nashua Conservation Commission Wetlands Application – 65 Spit Brook Road

Dear Matthew Sullivan,

Please find the attached wetlands application for our electrical upgrades design at 65 Spit Brook Road for BAE Systems. On behalf of BAE Systems, our consultant team requests the Nashua Conservation Commission's (NCC's) review of our application at the December 7, 2021 meeting of the NCC. Our wetland scientist and civil engineer plan to attend this meeting to answer questions from the NCC.

We look forward to discussing our application with you.

Sincerely,

Brent Weigel, PhD, PE
Senior Project Manager
bweigel@hallam-ics.com

Attachments:
[BAE - Nashua Conservation Commission Application - 2021-11-22.pdf]
[BAE - Parcel GIS Map.pdf]
[BAE - Wetland Report 10-19-21.pdf]
[BAE - Topographic Wetland Map (STAMPED).pdf]
[C-101 Site Plan.pdf]

CC:
Scott McPhie, NCC [McPhieS@nashuanh.gov]
Jennifer Riordan – Senior Environmental Scientist, GM2 [jriordan@gm2inc.com]
Terry Heise – Engineer, McFarland Johnson [theise@mjinc.com]
Adam Frosino – Engineer, McFarland Johnson [afrosino@mjinc.com]
Dawna Tousignant – Senior Facilities Engineer [dawna.tousignant@baesystems.com]
Norman Coutu – Manager Facilities Engineering [norman.d.coutu@baesystems.com]
Ron Blanchette – Senior Principal Environmental, Safety & Health Specialist [ronald.blanchette@baesystems.com]

Date: 10/27/2021

1 inch: 1,888 feet

City of Nashua
Planning Department
229 Main Street
Nashua, New Hampshire 03061-2019

Planning & Zoning 589-3090
Fax 589-3119
WEB www.nashuanh.gov

Nashua Conservation Commission (NCC)
Wetland Application Review Form
As of August 10, 2016

Meeting Schedule: The Nashua Conservation Commission (NCC) meets the first Tuesday of the month Tuesday at 7:00 p.m. in Room 208, 2nd floor, Nashua City Hall.

Land Use Code: Refer to the Land Use Code, Chapter 190 Nashua Revised Ordinance - Article XI- Wetlands and the Wetland Application Process per 190-284.

Fees: Fees associated with submitting an application to the NCC are per NRO 190-267 (F) Conservation Commission.(1) For any project that requires a site plan or subdivision plan to be filed with the Planning Board $275 and (2) for all other applications $110.

Conservation Commission Members and Staff Contact Information: The applicant is responsible for sending a copy of the completed application packet to each NCC member when the application is submitted to the City. Refer to the attached list of current NCC members. The application submitted to the City shall be mailed or delivered to the attention of the Planning Department NCC staff by the application deadline. Please contact Scott McPhie with questions and to be scheduled on an upcoming agenda at 589-3111 or McPhieS@nashuanh.gov.

Wetland Application Review Form: The completed form and related information must be submitted by the application deadline. The completed application shall include the original application plus one (1) copy, full size plans, and one reduced copy of the full plan set (11 x17), and any other documentation related to the application.

Wetland Delineation: Wetlands shall be delineated by a State of New Hampshire certified wetland scientist, per 190-116. Contact the NH Joint Board of Licensure and Certification• Natural Scientists-Wetland Scientists roster or a local surveying/engineering firm. NCC recommendation to ZBA: A wetland related special exceptions required from the Zoning Board of Adjustment (ZBA), following review by the NCC. The NCC provides a written recommendation to the ZBA. The applicant/owner is responsible for contacting Carter Falk, Deputy Planning Manager (Zoning) regarding the special exception process with the ZBA. Mr. Falk can be reached at 589-3116.

Site Walk: A site walk may be scheduled by the NCC.

NCC Phone and Mailing Address: Information to be submitted to the NCC can be addressed to: Chair, NCC, City Hall, 229 Main Street, PO Box 2109, Nashua, NH 03061-2019.

Minutes, agendas and meeting schedule can be viewed on the City's website

Nashua Conservation Commission

Member List

As of March 10, 2020

Sherry Dutzy (Chairman)
18 Swart Terrace
Nashua, NH 03064

Gene Porter (Vice Chair)
77 Concord Street
Nashua, NH 03064

Richard Gillespie (Clerk)
15 Spencer Drive
Nashua, NH 03062

Brandon Pierotti (Treasurer)
14 Lochmere Lane
Nashua, NH 03063-1521

William Parker
1 Rockland Street
Nashua, NH 03064

Michael Reinke
35 Lock Street
Nashua, NH 03061

Joel Ackerman
13 Woodcrest Drive
Nashua, NH 03062

Gloria McCarthy (Alternate)
65 Musket Drive
Nashua, NH 03062-1442

Ernest A. Jette (Ald. Rep)
14 Foxglove Court
Nashua, NH 03062

Elizabeth Lu (Alt. Ald. Rep)
17 Roby Street
Nashua, NH 03060-4960

Joshua Hauser (Alternate)
41-43 Williams Street
Nashua, NH 03060-4010

Carol Sarno (Alternate)
15 Rocky Hill Drive
Nashua, NH 03062

City of Nashua
Planning Department
229 Main Street
Nashua, New Hampshire 03061-2019

Planning & Zoning 589-3090
Fax 589-3119
WEB www.Nashuanh.gov.

Nashua Conservation Commission
Wetlands Application
(Per NCC May 2013)

Date Application Submitted: 11/22/2021

Property Information

1. **Property Street Address:** 65 Spit Brook Road
2. **Tax Map and Lot #:** A-12
3. **Existing Use of the Property:** Industrial / R&D Facility
4. **Proposed Use of the Property:** Industrial / R&D Facility
5. **Name of water body or wetland (area) that may be impacted:**
   Wetland - Other: 7,098 Square Feet
6. **Wetland Classification:** (See NRO, Article XI Wetlands 190-111 to 190-117):
   Prime Wetland: [ ] Critical Wetland: [ ] Other wetlands >9,000sf: [ ]
   Other (wetlands (3,000-9,000sf): [X] Vernal Pools: [ ]
7. **Impacts proposed within the Wetland and the Wetland Buffer: (impacts in square feet):**
   Wetland: Temporary: [ ] Permanent: [ ]
   Buffer: Temporary: [ ] Permanent: [X] 311 SF
8. **Is the site within 250 feet of waters regulated by the NH Shoreland Water Quality Protection Act (SWQPA)?** Yes: [ ] No: [X]
9. **Is the property within the City of Nashua Water Supply Protection District?** (NRO 190-24) Yes: [ ] No: [X]
10. **Are any of the following uses located within 125 feet or sited in such manner so as to pose a serious environmental hazard to a nearby wetland (NRO 190-115 D)?**
    - Septic Systems: Yes: [ ] No: [X]
    - Underground storage tanks: Yes: [ ] No: [X]
    - Junkyards or salvage yard: Yes: [ ] No: [X]
    - Stockpiling of any materials: Yes: [ ] No: [X]

Fees

Amount enclosed: $110, Check #: 086840 (Make Check payable to City of Nashua).

Owner(s)) Information

Name: BAE Systems Information & Electronic Systems Integration Inc. - Norman Coutu

Mailing Address: 65 Spit Brook Road, Nashua, NH 03061-0868 P.O. Box 868 NHQ 01-193

Phone #: 603-885-0469

Email Address: norman.d.coutu@baesystems.com

Signature of Owner(s/ Date Signed):

Norman D. Coutu 11/18/2021

Authorized Agent Information

Owner(s) Signature: I hereby certify that the information included on this application and submitted in conjunction with this application is true to the best of my knowledge and that the person(s) listed are authorized to present this application on my behalf to the Nashua Conservation Commission. I also understand that the NCC may schedule a site walk prior to reviewing or acting upon this application. The site walk notice will be posted.

I / We also hereby authorize the Nashua Conservation Commission, it staff and /or agents to enter and inspect the property for action by this application.

Signature of Representative/Agent (Title/Business Name)/Date Signed:

McFarland Johnson - Adam Frosino (McFarland Johnson) 11/18/2021

Name of NH Certified Wetland Scientist: Jennifer Riordan, GM2 Inc, State #: 269,

Expiration Date: 12/31/2022 Is the stamp and signature included? YES

Project Description

Please provide a brief description of your proposed project including changes proposed to the topography, natural drainage, equipment to be used and estimated start and completion date for the project. If more space is needed attach additional pages.

This project includes the construction of generator with concrete pad and building to store electrical equipment. Minor changes to the topography will be necessary to construct the concrete pad for the generator. Storm water currently drains to the west as the elevation decreases. Proposed impact to the wetland buffer will convert a current paved parking lot into a building pad. Construction is expected to start in April of 2022 and conclude in December 2022.

Project Time Frame

Estimated Project Start Date: 4 / 1 / 2022 End Date: 12 / 31 / 2022

Vegetation/Natural Communities Assessment of the Site

1. General description of vegetation on the property: For example- The back yard is mostly grass, with a 10 x 5 perennial garden and a 20 foot tree buffer on the south side of the property, which includes mature maple, ash and hickory. If invasive species are known to exist on the property, please identify them and their location on the plan. Provide a brief description of the vegetation that currently exists near the wetland and wetland buffer, be specific if possible.

   There is a mowed grass buffer strip immediately surrounding the existing parking area. Behind the grass strip is a mature tree line comprised of mostly deciduous trees and dense brush. The existing wetland is contained within this tree and brush line.

Tree Removal

Tree Removal Proposed: Yes: [ ] No: [X]

Tree Replacement Plan Provided: Yes: [ ] No: [X]

Total Number of Trees Being Removed #: 0

2. Amount of impervious surfaces on the lots (approximate square feet) (example: house 24 x 40ft, driveway (10 x 22ft), pool area (15 x 12ft).

   Total proposed impervious (square feet): 905,076

   Total existing impervious (square feet): 903,764

3. Wetland Mitigation Measures - The NCC may request that some form of mitigation be provided. Your suggestions are welcome and will be discussed at the meeting. Be specific. The NCC may include these and other mitigation mechanisms as stipulations if a recommendation for approval is granted.

   No permanent mitigation is planned as the proposed project will be constructed in an existing impervious paved parking area that is currently encroaching on the wetland buffer.

4. Photographs (5" x 7" or color copy), labeled with date/month/year taken, and property address. Photographs to show the existing site features from several directions, Photographs to be submitted attached to a 8 ½" x 11" paper, identifying the view directions (for example, looking southwest).

5. GIS map from the City's GIS website (most current) showing at a minimum the following information: project area, property boundaries, roads, water bodies, conservation areas, wetlands, trails, easements, most recent aerial layer and other information relevant to reviewing this application.

Plan Submittal Requirements

The plan submitted with the completed application shall provide the following information or have notes included on the plan related to the requirements listed below.

Plan showing: (label all features as existing or proposed)

1. Date of plan.
2. Disturbed areas – existing and proposed and nature of disturbance.
3. Drainage, existing and proposed (labeled), flow direction.
4. Easements on the property-label (example: drainage, trail, slope, etc.).
5. Erosion control and sedimentation features, including Best Management Practices (BMP) to be utilized, for example straw bales (hay bales not accepted) and location.
6. Hazardous materials, asbestos or other known contamination on the site.
7. Impervious areas labeled as existing or proposed.
8. Landscape planting plan.
9. Limits of NH Surface Water Quality Protection Act (SWQPA) – 250 feet.
10. North Arrow (magnetic or true north).
11. Pervious pavement areas.
12. Prepared By- Name, address and phone number.
13. Property boundaries.
14. Road names labeled.
15. Scale- one (1) inch to 50 feet or less for example (1"=40', 1"= 10').
16. Signature and stamp of related professionals responsible for the content of the plan and application including engineer, surveyor and wetland scientist.
17. Snow storage area.
18. Stormwater details.
19. Structures (buildings) – size, use and distance to wetland/wetland buffer.
20. Trees proposed to be cut or removed from the site.
21. Topographic details for field survey or from City's GIS (most current).
22. Trails- location, (label as existing or proposed)- condition, material.
23. Vegetated areas- identify areas as trees, gardens, understory growth, etc.
24. Water body name (including any intermittent or seasonal streams (if named).
25. Wetlands and wetland buffer areas- acres and square feet, and proposed impacted areas.
26. Wetland and buffer areas located on or immediately adjacent to the subject property, labeled – primary, critical, etc. and setback requirements, within 100 feet of a wetland.

Special Exception Criteria

The following statements must be completed to assist the Conservation Commission in reviewing the application relative to the special exception criteria which will be reviewed by the Zoning Board of Adjustment (per 190-115B items (1-9).

1) **The use or activity proposed and its attendant impacts cannot reasonably be avoided.**

External electrical equipment placement is required by the facility and every attempt was made to place the proposed equipment in existing impervious and developed locations. The equipment cannot be moved out of the buffer completely due to the presence of an access road that is used by tractor trailers on a regular basis. Reducing the width of this road would create access and safety concerns. The project will have a negligible impact to the overall impervious area and drainage runoff volumes/patterns.

2) **The least damaging route and methodology have been selected, and that which is being proposed is the best practicable alternative available.**

The proposed electrical equipment was located in close proximity to the main building and in existing impervious/developed locations to reduce the amount of disturbance and impact from the project. The project will result in a negligible impact to the overall impervious area and drainage runoff volumes/patterns.

3) **That reasonable and acceptable impact mitigation measures have been incorporated where necessary and appropriate to minimize wetland loss or degradation.**

No wetland loss or buffer degradation is anticipated from the project; therefore no wetland mitigation is being proposed.

4) **That the overall impact of encroaching into wetland or buffer areas is necessary for the productive use of adjoining buildable land and, as such, non-encroachment is outweighed by the benefits thereby derived.**

The proposed wetland buffer impact area (311 SF) is currently a paved parking lot and the proposed project will not encroach the wetland buffer any more than the current existing conditions.

5) That no significant impact on the habitat of rare or endangered species or exemplary communities, as listed by the State of New Hampshire or Federal government, will result.

Copy of New Hampshire Natural Heritage Bureau (NHB) letter attached: Yes: [ ] No: [X]

The proposed project will not impact any natural environments. An existing asphalt paved parking lot will be converted to a building concrete pad for a modular electrical equipment building resulting in no impact to animal habitats.

6) That the best available adequate erosion and sedimentation control methods are incorporated.

The minor amount of soil disturbance area around the proposed electrical equipment pads will be protected and contained by temporary silt fence during construction. Post construction no erosion and sediment control practices will be required.

7) That the proposed activity or use shall not significantly impair wetland capacity to provide important wildlife and fishery functions, including habitat, food, shelter, breeding, migration and over-wintering.

The proposed wetland buffer impact area (311 SF) is currently a mostly paved parking lot and the proposed project will not significantly impair the capacity of the wetland any more than the current existing conditions. No modifications that would alter the functionality of the existing wetland and the buffer are being proposed.

8) That the project shall not impair the stability of a water body's bank.

The proposed wetland buffer impact area (311 SF) is currently a mostly paved parking lot and the proposed project will not significantly impair the capacity of the wetland any more than the current existing conditions. No modifications that would alter the functionality of the existing wetland and the buffer are being proposed.

9) That the wetland and buffer functions of hydrologic absorption capacity and storage shall not be impaired.

The proposed wetland buffer impact area (311 SF) is currently a mostly paved parking lot and the proposed project will not significantly impair the capacity of the wetland any more than the current existing conditions. No modifications that would alter the functionality of the existing wetland and the buffer are being proposed.

If additional pages are attached, please identify the project location on each page, and the specific application requirements you are responding to.

BAE SYSTEMS
65 SPIT BROOK ROAD
NASHUA, NH

WETLAND DELINEATION REPORT

Prepared by:

GM2 Associates, Inc.
197 Loudon Road, Suite 310
Concord, NH 03301

October 2021

Table of Contents

APPENDICES

A. USGS Location Map
B. Wetland Sketch Map
C. Data Forms

Report Prepared By:

Jennifer Riordan, NH CWS #269

Wetland Delineation Report
BAE Systems – 65 Spit Brook Road

1.0 INTRODUCTION

This report provides a summary of the wetland resources that were delineated for a portion of the BAE Systems campus located at 65 Spit Brook Road in Nashua, NH. The site is located on the northwestern side of the BAE Systems campus behind the MEC building (refer to USGS Location Map in Appendix A and Wetland Sketch Map in Appendix B).

2.0 METHODOLOGY

The study limits for the wetland delineation included the area between the MEC building and the Everett Turnpike/US Route 3 and extended approximately 200 feet into a forested section behind the building. The delineation was completed on October 14, 2021 within the growing season and during normal (non-drought) conditions. The wetland delineation was conducted by Jennifer Riordan (NH CWS #269) and Meg Gordon of GM2 Associates, Inc. (GM2). Wetlands were delineated in accordance with the US Army Corps of Engineers (ACOE) 1987 Methodology and the ACOE Northcentral and Northeast Regional Supplement (2012). Individually-labeled flags were placed in the field to designate the wetland boundaries and the flags were then survey located by GM2.

Federal wetland classifications were assigned in accordance with "Classification of Wetlands and Deepwater Habitats of the United States" (Federal Geographic Data Committee, 2013). These classifications are described further in Section 4.0. Wetland delineation field data forms (a set of wetland and upland plots) were completed and are included in Appendix C.

3.0 EXISITING CONDITIONS

The study area includes a portion of the parking lot behind the MEC building and extends approximately 200 feet into the adjacent wooded area. It is bordered to the west by the Everett Turnpike/US Route 3. The entire study area is located on BAE Systems property. A non-jurisdictional (not regulated) drainage swale is located along the western side of the parking lot and MEC building. Since this swale was excavated in an upland area, contains riprap instead of natural wetland soils, and has a limited amount of wetland vegetation, it was not delineated as a wetland resource. The drainage swale begins at a pipe that outlets from the MEC building and it appears that the swale was constructed to convey stormwater and/or building drainage rather than natural flows.

4.0 WETLAND RESOURCES

The wetland resources are located within the forested section behind the existing building. Wetland A is a forested/emergent/scrub-shrub wetland located at the northeast edge of the study area behind a retaining wall. Wetland B is a forested/emergent wetland located in the western and central portions of the study area. It consists of an excavated swale near the highway and an emergent area near the parking lot.

4.1 Wetland A

Federal Classifications: palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded/saturated, (PSS1E), palustrine, emergent, persistent, seasonally flooded/saturated, (PEM1E)

Flag series A (flags A-1 to A-4) corresponds to a wetland located behind the retaining wall of the parking lot access road, at the northeast edge of the study area. A culvert outlets from the retaining wall into the emergent portion of the wetland. The forested and scrub-shrub portions are on the northwestern side of the wetland closer to the project limits. Wetland A continues northeast beyond the study area toward a small pond.

Wetland A near flag A-1 and the retaining wall

Wetland A is vegetated with highbush blueberry (*Vaccinium corymbosum*), cinnamon fern (*Osmundastrum cinnamomeum*), cattail (*Typha latifolia*), sedges (*Carex sp.*), red maple (*Acer rubrum*), and glossy buckthorn (*Frangula alnus*). The adjacent upland contains white pine (*Pinus strobus*), red oak (*Quercus rubra*), princess pine (*Dendrolycopodium obscurum*), partridge berry (*Mitchella repens*), highbush blueberry, and cinnamon fern.

Wetland A near flag A-4

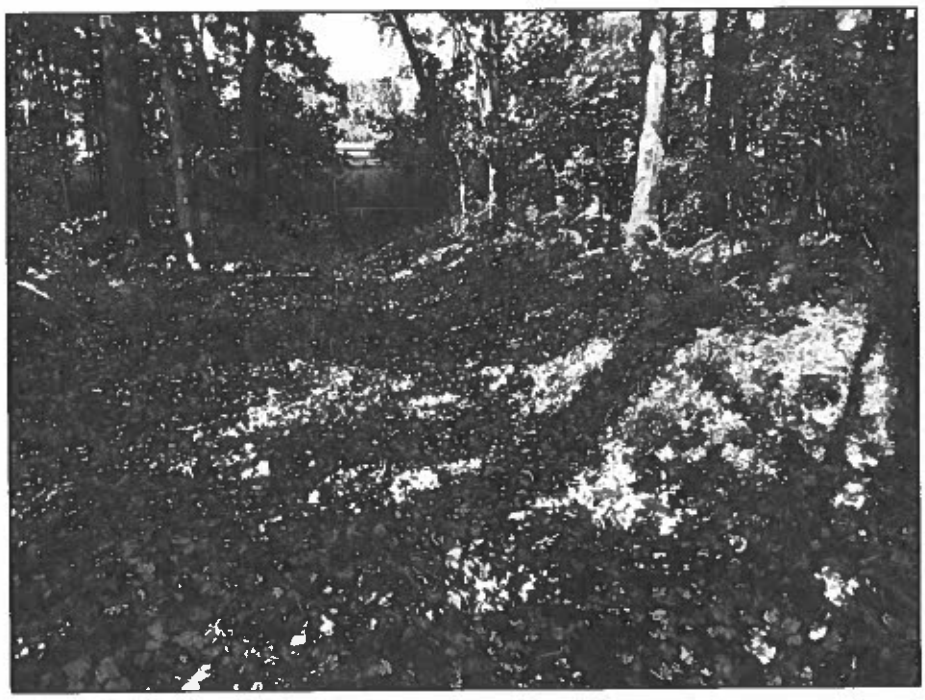
4.2 Wetland B

Federal Classifications: palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated, excavated (PFO1Ex), palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E), palustrine, emergent, persistent, seasonally flooded/saturated (PEM1E)

Flag series B (flags B-1 to B-17) corresponds to a forested/emergent wetland located in the western and central portions of the study area. It includes an excavated swale that begins at culvert under the Everett Turnpike/US Route 3. The wetland then extends and widens towards the parking lot incorporating forested and emergent areas. The portion of the wetland located west of the fence, within the highway right-of-way, was not delineated. Wetland B also connects to a non-jurisdictional drainage swale that runs along the western edge of the parking lot and MEC building.

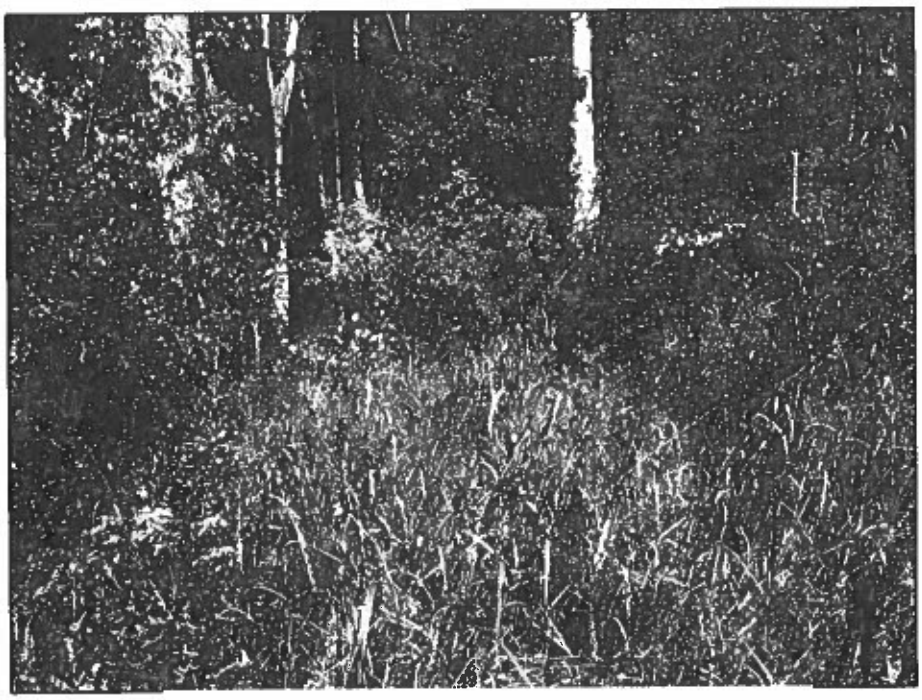
At the time of the site visit (10/14/21), the wetland had areas of saturated soils but no standing or flowing water.

Wetland B is vegetated with red maple, white ash (*Fraxinus americana*), glossy buckthorn, purple loosestrife (*Lythrum salicaria*), cattail, soft rush (*Juncus effusus*), barnyard grass (*Echinochloa sp.*), highbush blueberry, winterberry (*Ilex verticillata*), royal fern (*Osmunda spectabilis*), and grape (*Vitis sp.*).



Wetland B swale near flag B-3

The adjacent upland is vegetated with white pine, red oak, partridge berry, highbush blueberry, glossy buckthorn, interrupted fern (*Osmunda claytoniana*), and New York fern (*Parathelypteris noveboracensis*).



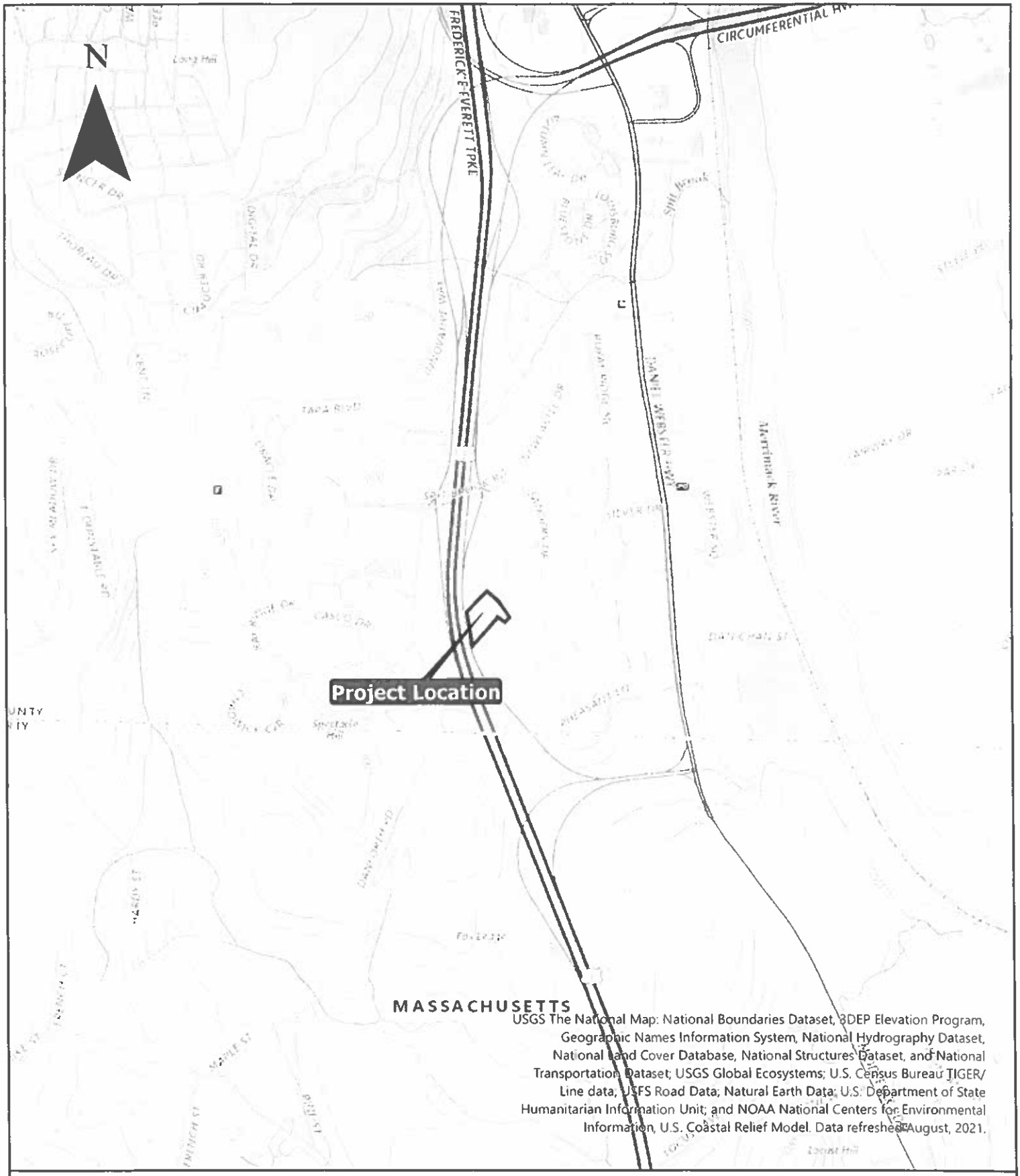
Wetland B emergent and forested areas near flag B-7

5.0 SUMMARY

Two separate wetlands (Wetland A and B) were delineated within the study limits of the BAE Systems project area. Wetland A continues northeast beyond the study area to a larger wetland community. Wetland B is a smaller wetland that includes an excavated swale. It also connects to a non-jurisdictional drainage swale that is located along the western edge of the parking lot and MEC building. Review of the NH Department of Environmental Services Wetlands Permit Planning Tool showed that BAE Systems received a permit in 2016 for maintenance dredging of the swale within Wetland B, indicating that this wetland has been previously regulated by NHDES.

APPENDIX A

USGS Location Map



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data, USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

GM2

USGS Location Map

BAE Systems
65 Spit Brook Road
Nashua, NH

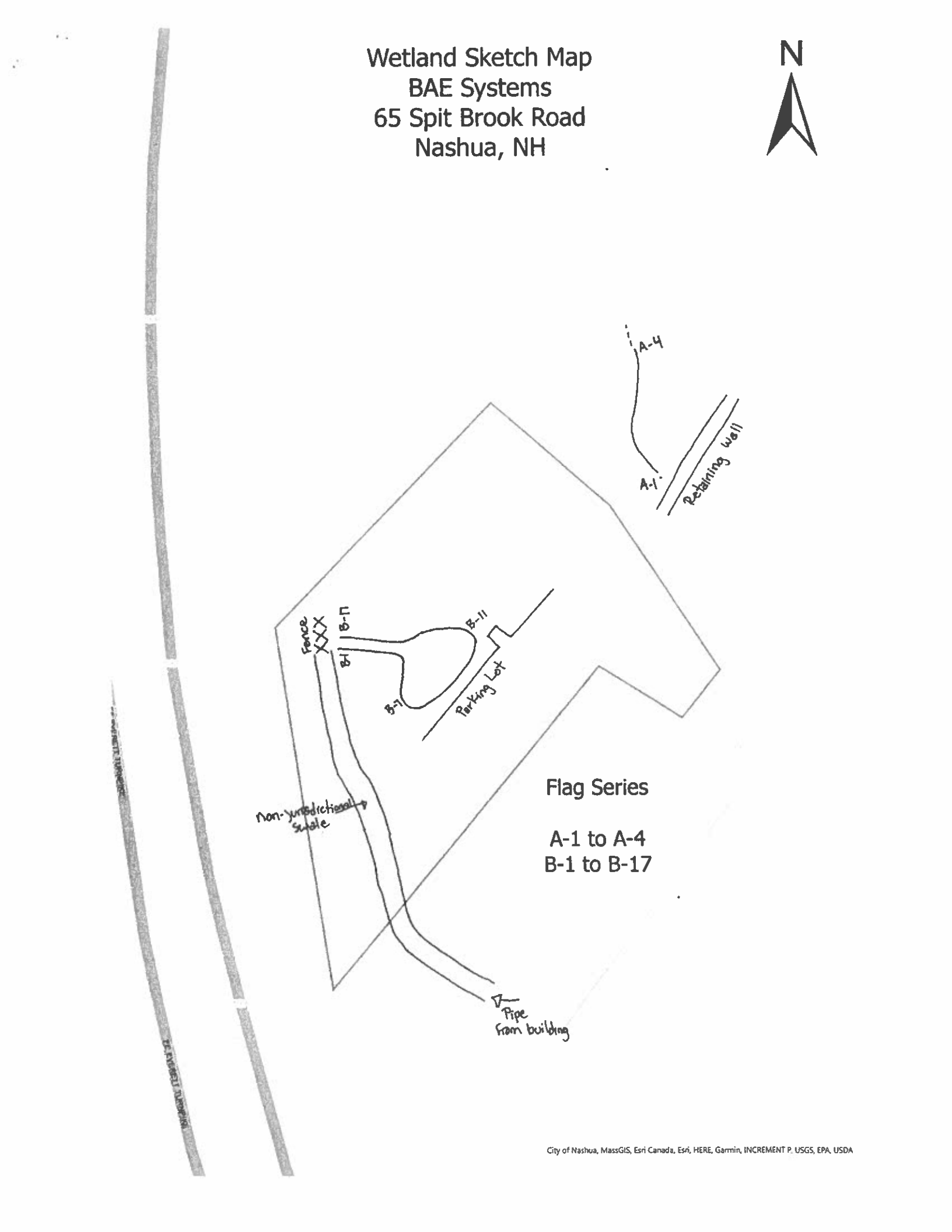
0 0.3 0.6 0.9 Miles

Scale: 1:24,000

APPENDIX B

Wetland Sketch Map

Wetland Sketch Map
BAE Systems
65 Spit Brook Road
Nashua, NH



APPENDIX C

Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: BAE - 65 Spit Brook Road City/County: Nashua/Hillsborough Sampling Date: 10/14/21

Applicant/Owner: BAE Systems State: NH Sampling Point: B-Wet

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace? Local relief (concave, convex, none): Slightly concave Slope (%): < 2%

Subregion (LRR or MLRA): LRR R Lat: 42.70 Long: 71.44 Datum:

Soil Map Unit Name: CpC - Chatfield-Hollis-Canton complex NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: B

Remarks: (Explain alternative procedures here or in a separate report.)
Data point taken near flags B-12 and B-13.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 12

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: B-Wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2. *Fraxinus americana*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Frangula alnus*	50	Yes	FAC
2. *Salix discolor*	3	No	FACW
3. *Fraxinus americana*	5	No	FACU
4. *Quercus rubra*	5	No	FACU
5. *Vaccinium corymbosum*	5	No	FACW
6. *Ilex verticillata*	3	No	FACW
7.			
	71	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Lythrum salicaria*	20	Yes	OBL
2. *Osmunda spectabilis*	10	Yes	OBL
3. *Thelypteris palustris*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Vitis sp.*	10	Yes	
2.			
3.			
4.			
	10	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: B-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Mucky Sand	Loamy sand with organic
5-8	10YR 3/2	50					Mucky Sand	Loamy sand
	10YR 4/2	50						
8-14	2.5Y 5/2	80					Sandy	Loamy sand
	10YR 2/1	15						
	10YR 6/4	5						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: BAE - 65 Spit Brook Road City/County: Nashua/Hillsborough Sampling Date: 10/14/21

Applicant/Owner: BAE Systems State: NH Sampling Point: B-Up

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Terrace? Local relief (concave, convex, none): None Slope (%): < 2%

Subregion (LRR or MLRA): LRR R Lat: 42.70 Long: 71.44 Datum:

Soil Map Unit Name: CpC - Chatfiled-Hollis-Canton NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: B-Up

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	63	Yes	FAC
2. *Pinus strobus*	20	No	FACU
3. *Quercus rubra*	20	No	FACU
4.			
5.			
6.			
7.			
	103	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Vaccinium corymbosum*	20	Yes	FACW
2. *Frangula alnus*	10	No	FAC
3. *Pinus strobus*	20	Yes	FACU
4. *Prunus serotina*	5	No	FACU
5. *Ilex verticillata*	5	No	FACW
6. *Hamamelis virginiana*	10	No	FACU
7.			
	70	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Pinus strobus*	3	No	FACU
2. *Mitchella repens*	20	Yes	FACU
3. *Amelanchier canadensis*	20	Yes	FAC
4. *Osmunda claytoniana*	3	No	FAC
5. *Parathelypteris noveboracensis*	20	Yes	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	66	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B-Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 2.5/1						Sandy	Loamy sand
12-14	10YR 4/4						Sandy	Loamy sand
14-20	10YR 5/3	90					Sandy	Loamy sand
	2.5Y 2.5/1	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

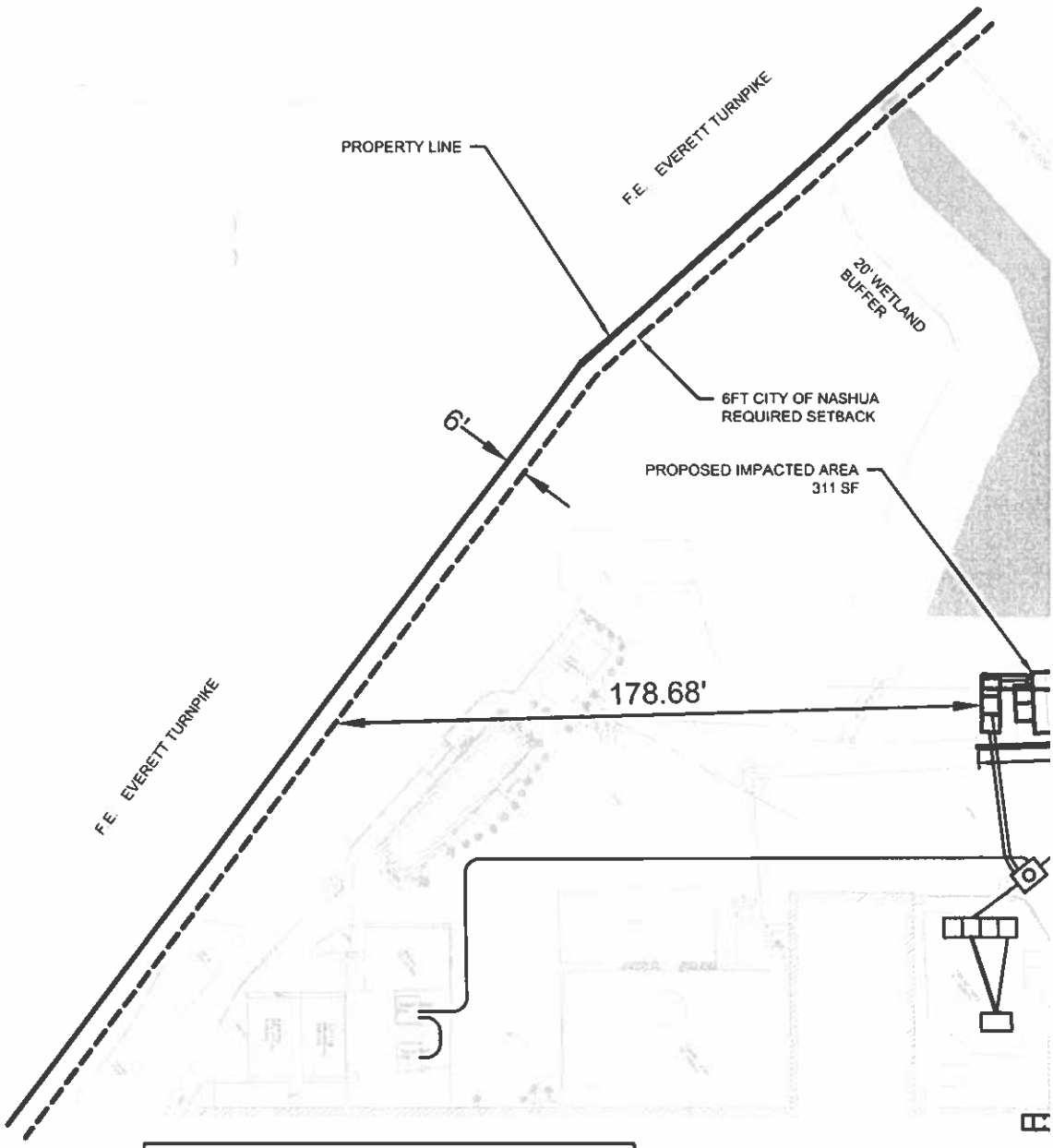
Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)



TAX ID #: A-12
OWNER: BAE SYSTEMS INFORMATION & ELECTRONIC SYSTEMS INTEGRATION

McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NEW HAMPSHIRE 03301

BAE S
NASHUA, N

GENERATOR
NASHUA ZONING BOARD (

URVEY NOTES:

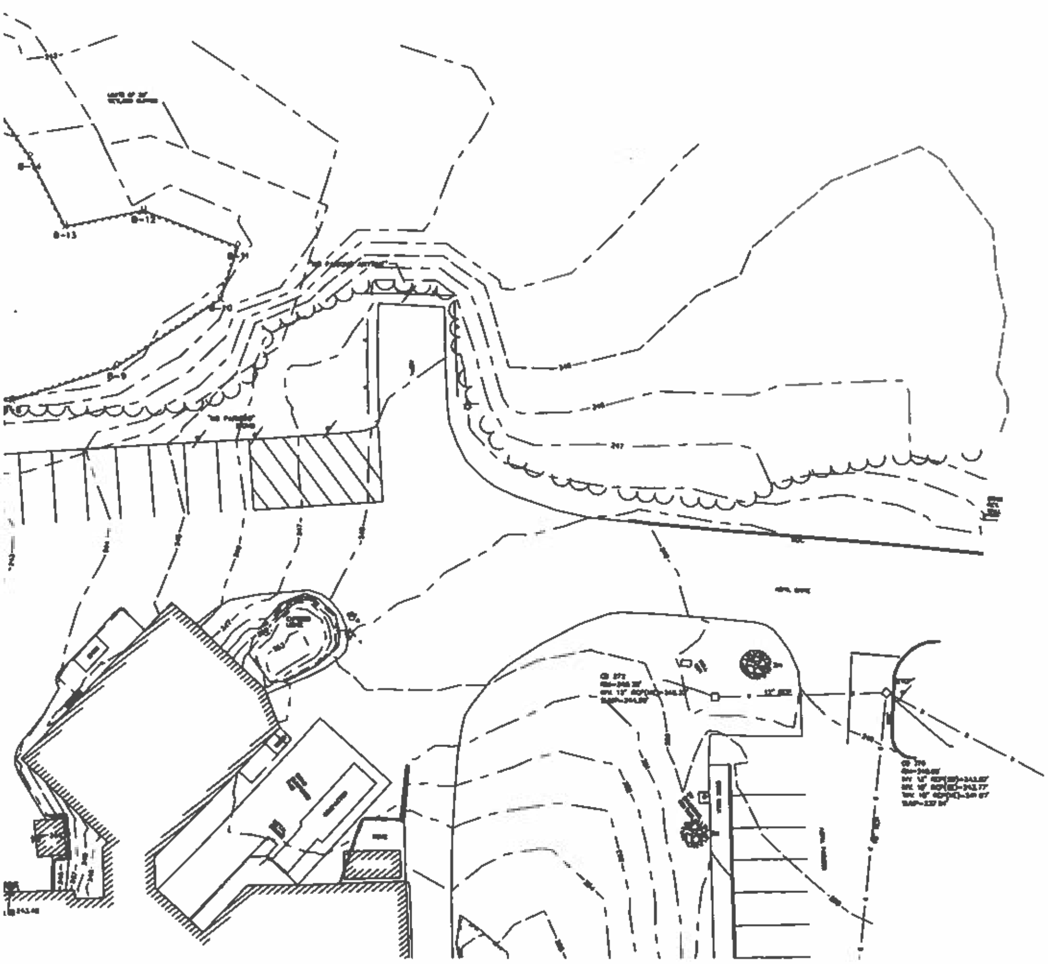
1. This survey is the result of an actual on-the-ground survey by this office using Leica TS-12 3" robotic total stations and Trimble R12 GNSS/GPS receivers completed between Oct. 18 and Oct. 19, 2021. Primary control traverse error of closure better than 1:10,000.

2. Horizontal and vertical datum based on NH State Plane Coordinate System, NAD83(2011) and NAVD88 established by network-corrected RTK GPS.

3. Underground utilities are shown as approximate and based on above ground features, field measurements without the benefit of ingress into structures and record plans. Assumptions were made to draw the underground drain lines where they're shown. Existing drawing layers with the prefix "BAE-SUE-CSI FINAL" consists of plan and utility linework developed by others.

4. Wetlands shown were delineated by this office's Jennifer Riordan, NH Certified Wetland Scientist #269 on Oct. 14, 2021.

5. This premise is a portion of City of Nashua parcel A-12, with a physical address of 65 Spit Brook Road. The record owner is "BAE Systems Information and Electronic Systems Integration Inc." with a record source of title of HCRD B:6322 P:353.



TOPOGRAPHIC WORKSHEET OF A PORTION OF

65 SPIT BROOK ROAD
NASHUA, NEW HAMPSHIRE
COUNTY OF HILLSBOROUGH
Owner of Record: BAE Systems Information and Electronic Systems Integration, Inc.
Prepared for: HALLAM-ICS

NH LLS #[illegible]

NOT VALID UNLESS SIGNED

GRAPHIC SCALE 1" = 20'

0 20 40 60 80

ONS

JOB: [illegible]

SCALE: 1" = 20

DATE: November 16, 2021

SHEET 1 of 1